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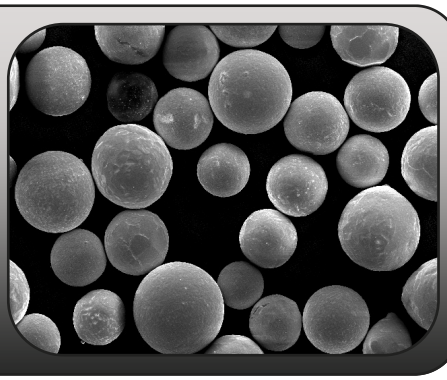
# Premium Materials for Laser Cladding

# CFS



## Product Overview

C&M Technologies is pleased to introduce a full line of premium spherical cast carbide materials for various hard facing processes. Our material begins as CF (cast fused) carbide which is carefully selected and must meet stringent internal requirements before being converted into CFS (cast fused spherical) carbide. Our CFS material is produced by a melting process followed by a proprietary thermal treatment. The final material is spheroidal and consists of a two phase mixture (WC and W2C), in a very fine, homogenous, eutectic phase structure. This very fine phase arrangement is the result of the proprietary thermal treatment and leads to higher micro-hardness and improved thermal stability during cladding processes. Due to the general spherical shape of the material the primary applications CFS are reduced counter-part wear and extreme abrasion resistance in the most aggressive environments.

## Material Properties

| | |
|---|---|
| Composition: | CFS (Cast Fused Spherical) |
| Grain Sizes: | -180, +20µm* |
| Morphology: | Spheroidal |

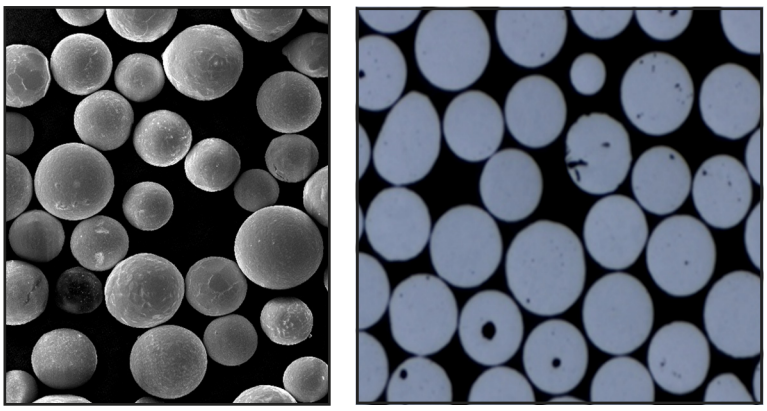
*Grain size can tailored to specific requirements

## Typical Clad Properties

| | |
|---|---|
| Micro Hardness (HV 0.1) : | |
| CFS | 2800 - 3200 |
| Porosity (%) : | < 1 |
| Deposit Efficiency (%) : | >70%[2] |

**Note[1]:** Deposit efficiency is influenced by process parameters

## Typical Microstructure



**CFS**

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